



DOCKET NO: V0189.70018US00

CGC

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.: US 6,833,250 B2  
Issue Date: December 21, 2004  
Patentee: Barb Ariel Cohen  
Serial No: 09/759,815  
Confirmation No: 2715  
Filed: January 10, 2001  
For: DETECTION AND REMOVAL OF CHITINOUS MATERIAL IN A  
BIOLOGICAL SAMPLE

Examiner: Ralph J. Gitomer  
Art Unit: 1651

Certificate  
FEB 01 2005  
of Correction

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 26/01 day of January, 2005.

June Watson  
June Watson

Mail Stop Certificate of Correction  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

REQUEST FOR ENTRANCE OF CERTIFICATE OF CORRECTION  
UNDER 35 U.S.C. §254 and §255

Sir/Madam:

Patentee respectfully requests the correction of errors in the printing of the above-captioned patent. Specifically, the inventors are incorrect, and claim 33 has two typographical errors made by the Patent Office. Please correct as follows:

Inventors:

There should only be one inventor listed, "Barb Ariel Cohen"; all others should be deleted. Enclosed is a copy of a Petition to correct Inventorship Under 37 CFR §1.48(b) which was filed on February 14, 2003. The petition was accepted by the U.S. Patent and Trademark Office as indicated in the Office Action of April 2, 2003.

Claims:

In Column 24, line 17, delete "Stemphyliuin" and replace with --*Stemphylium*--.  
In Column 24, line 18, delete "Altemaria" and replace with --*Alternaria*--.

Patentee points out that the corrections requested do not involve change in the patent that constitutes new matter or would require reexamination, and therefore, respectfully request that a certificate of correction be issued. Patentee encloses a copy of the issued patent with the errors highlighted. Since the error was made by the Patent Office, it is respectfully submitted that no fee is due. However, if the Examiner deems a fee necessary, the fee may be charged to Deposit Account No. 23/2825. Should any questions arise concerning the foregoing, please contact the undersigned at the telephone number listed below.

For the reasons stated above, Patentee respectfully requests entrance of the enclosed Certificate of Correction.

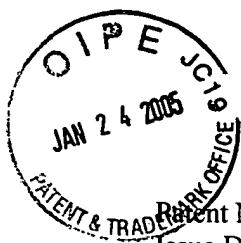
Respectfully submitted,

  
John R. Van Amsterdam, Reg. No. 40,212  
Wolf, Greenfield & Sacks, P.C.  
600 Atlantic Avenue  
Boston, Massachusetts 02210-2211  
Telephone: (617) 646-8000

Docket No. V0189.70018US00

Date: January 21, 2005

xNDD



DOCKET NO: V0189.70018US00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.: US 6,833,250 B2  
Issue Date: December 21, 2004  
Patentee: Barb Ariel Cohen  
Serial No: 09/759,815  
Confirmation No: 2715  
Filed: January 10, 2001  
For: DETECTION AND REMOVAL OF CHITINOUS MATERIAL IN A  
BIOLOGICAL SAMPLE  
Examiner: Ralph J. Gitomer  
Art Unit: 1651

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 21st day of January, 2005.

June Watson  
June Watson

Mail Stop Certificate of Correction  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith are the following document(s):

- Request for Entrance of Certificate of Correction Under 35 U.S.C. §254 & §255
- Certificate of Correction - Form PTO-1050
- Copy of pertinent pages from U.S. Patent No. US 6,833,250 B2
- Copy of Petition to Correct Inventorship Under 37 CFR §1.48(b) previously filed
- Return Receipt Postcard

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned collect at (617) 646-8000, Boston, Massachusetts.

No fee is enclosed. If a fee is necessary, the Commissioner is hereby authorized to charge Deposit Account No. 23/2825. A duplicate of this sheet is enclosed.

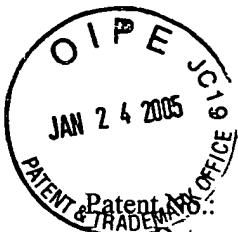
Respectfully submitted,

John R. Van Amsterdam  
John R. Van Amsterdam, Reg. No. 40,212  
Wolf, Greenfield & Sacks, P.C.  
600 Atlantic Avenue  
Boston, Massachusetts 02210-2211  
Telephone: (617) 646-8000

Docket No. V0189.70018US00  
Date: January 21, 2005  
xNDD

860388.1

22 FEB 2005



DOCKET NO: V0189.70018US00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent & TRADEMARK OFFICE  
Issue Date: US 6,833,250 B2  
Patentee: Barb Ariel Cohen  
Serial No: 09/759,815  
Confirmation No: 2715  
Filed: January 10, 2001  
For: DETECTION AND REMOVAL OF CHITINOUS MATERIAL IN A  
BIOLOGICAL SAMPLE  
Examiner: Ralph J. Gitomer  
Art Unit: 1651

**CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)**

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 21st day of January, 2005.

  
June Watson

**Mail Stop Certificate of Correction**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith are the following document(s):

- Request for Entrance of Certificate of Correction Under 35 U.S.C. §254 & §255
- Certificate of Correction - Form PTO-1050
- Copy of pertinent pages from U.S. Patent No. US 6,833,250 B2
- Copy of Petition to Correct Inventorship Under 37 CFR §1.48(b) previously filed
- Return Receipt Postcard

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned collect at (617) 646-8000, Boston, Massachusetts.

No fee is enclosed. If a fee is necessary, the Commissioner is hereby authorized to charge Deposit Account No. 23/2825. A duplicate of this sheet is enclosed.

Respectfully submitted,

  
John R. Van Amsterdam, Reg. No. 40,212  
Wolf, Greenfield & Sacks, P.C.  
600 Atlantic Avenue  
Boston, Massachusetts 02210-2211  
Telephone: (617) 646-8000

Docket No. V0189.70018US00  
Date: January 21, 2005  
xNDD

860388.1

2 FEB 2005

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : US 6,833,250 B2  
DATED : December 21, 2004  
INVENTORS : Barb Ariel Cohen

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

(75) Inventors: **Barb Ariel Cohen**, Watertown, MA (US)

In the claims:

**Claim 33,**

In Column 24, line 17, delete "Stemphyliuin" and replace with --Stemphylium--.

In Column 24, line 18, delete "Altemaria" and replace with --Alternaria--.

MAILING ADDRESS OF SENDER:

PATENT NO. US 6,833,250 B2

John R. Van Amsterdam  
Wolf, Greenfield & Sacks, P.C.  
600 Atlantic Avenue  
Boston, Massachusetts 02210-2211

22 FEB 2005



US006833250B2

(12) **United States Patent**  
Potts et al.

(10) Patent No.: **US 6,833,250 B2**  
(45) Date of Patent: **Dec. 21, 2004**

(54) **DETECTION AND REMOVAL OF CHITINOUS MATERIAL IN A BIOLOGICAL SAMPLE**

(75) Inventors: **Steven J. Potts, Davis, CA (US); David C. Slaughter, Davis, CA (US); James F. Thompson, Sacramento, CA (US); Jennifer J. Payne, Davis, CA (US); Barb Arlel Cohen, Watertown, MA (US)**

(73) Assignee: **Vicam, L.P., Watertown, MA (US)**

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 79 days.

(21) Appl. No.: **09/759,815**

(22) Filed: **Jan. 10, 2001**

(65) **Prior Publication Data**

US 2002/0107179 A1 Aug. 8, 2002

**Related U.S. Application Data**

(63) Continuation-in-part of application No. 09/519,533, filed on Mar. 6, 2000.

(51) **Int. Cl. 7** ..... C12Q 1/04

(52) **U.S. Cl.** ..... 435/34; 435/18

(58) **Field of Search** ..... 435/34, 18; 436/827; 530/370

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,289,747 A	9/1981	Chu
4,493,793 A	1/1985	Chu
4,526,871 A	7/1985	Avrameas et al.
4,659,658 A	4/1987	McCarthy et al.
5,250,410 A	10/1993	Sifkin
5,587,292 A	12/1996	Laine
5,914,239 A	6/1999	Laine
6,121,420 A	9/2000	Laine

**OTHER PUBLICATIONS**

Gourama H. Detection of Molds in Foods and Feeds. *J of Food Protection* 58(12):1389-1394 1995.\*

Cousin M. Chitin as a Measure of Mold Contamination of Agricultural Commodities and Foods. *J of Food Protection* 59(1):73-81, 1995.\*

Potts S. A Fluorescent Lectin Test for Mold in Raw Tomato Juice. *J of Food Science* 65(2):346-350 2000.\*

Baldo B. Lectins as Cytotoxic Probes of the Developing Wheat Grain. *Australian J Plant Physiol* 9:663-75, 1982.\*

Cousin (1996) "Chitin as a Measure of Mold Contamination of Agricultural Commodities and Foods." *J. Food Protection*, 59:73-81.

Gourama and Bullerman (1995) "Detection of Molds in Foods and Feeds: Potential Rapid and Selective Methods." *J. Food Protection*, 58:11389-1394.

Jarvis (1977) "A chemical method for the estimation of mould in tomato products." *J. Food Technology*, 12:581-591.

Jarvis and Williams (1987) "Method for Detecting Fungi in Foods and Beverages." *Food and Beverage Mycology*, 2<sup>nd</sup> ed., Editor L.R. Beuchat, Van Nostrand Reinhold, New York, pp. 599-636.

Jarvis et al., (1983) "Observations on the enumeration on moulds in food and feedingstuffs" *J. Appl. Bacteriol.* 55:325-336.

Lin & Cousin (1985) "Detection of Mold in Processed Foods by High Performance Liquid Chromatography." *J. Food Protection*, 48:671-678.

Lis & Sharon (1986) "Lectins as Molecules and as Tools." *Ann. Rev. Biochem.*, 55:35-67.

Patel (1992) "The applications of lectins in food analysis." *Trends in Food Sci. & Technol.* 3:35-39.

Patel et al., (1993) "Rapid Separation and Detection of Foodborne Yeasts and Moulds by Means of Lectins." In *New Techniques in Food and Beverage Microbiology*, pp. 31-41, Knoll, R.G., Gilmour, A., and Sussman, M., Eds. Blackwell Science Inc. Oxford, England.

Ride and Drysdale (1972) "A rapid method for the chemical estimation of filamentous fungi in plant tissue." *Physiol. Plant Pathol.* 2:7-15.

Stoddart and Herbertson (1978) "The Use of Fluorescein-labeled Lectins in the Detection and Identification of Fungi Pathogenic for Man: A Preliminary Study." *J. Med. Microbiol.* 11:315-324.

Battilani et al. (1996) "Fungal Growth and Ergosterol Content in Tomato Fruits Infected to Fungi." *Ital. J. Food Science* 4:283-289.

Eisenburg (1952) "Observations and Suggestions on Factory Control of Rot and Extraneous Matter in Tomato Products." *Nat. Can Assoc., Inc.* Let No. 1371.

Howard (1911) "Tomato Ketchup Under the Microscope: With Practical Suggestions to Insure a Cleanly Product." *U.S. Dept. Agr. Bureau of Chemistry*, Circular No. 68.

Sharma, P.D. et al. (1977) "Critique of the Chitin Assay Technique for Estimation of Fungal Biomass." *Trans. Br. Mycol. Soc.* 69:479-483.

Williams (1968) "The Detection of Rot in Tomato Products." *J. Ass. Pub. Analysts*, 6:69-84.

Potts et al. (2000) "A Fluorescent Lectin Test for Mold in Raw Tomato Juice." *Journal of Food Science*, vol. 65, No. 2: 346-350.

\* cited by examiner

**Primary Examiner**—Ralph Gitomer

(74) **Attorney, Agent, or Firm**—Wolf, Greenfield & Sacks, P.C.

(57) **ABSTRACT**

This invention provides novel methods for the detection of chitinous contaminants of non-chitinous biological materials. The methods are accurate, highly reproducible, rapid and relatively inexpensive. The methods are well suited to commercial applications, particularly in the food and agriculture industry where biological materials (e.g. food products) are regularly screened for contaminants (e.g. insect, mold, fungus, etc.). In one embodiment, the methods involve contacting a biological sample with a probe that is a lectin that binds chitin, contacting the sample with a pectinase; and detecting binding of said lectin to a chitin where the binding indicates the presence of chitin in the biological sample.

11. The method of claim 1, wherein said method further comprises contacting said sample with a blocking reagent.

12. The method of claim 11, method wherein said blocking reagent is serum albumin.

13. The method of claim 1, wherein said chitin degradation product is N-acetyl D-glucosamine.

14. The method of claim 1, wherein said lectin is labeled with a detectable label.

15. The method of claim 14, wherein said label is selected from the group consisting of a radioactive label, a magnetic label, a colorimetric label, an enzymatic label, a fluorescent label, a metal, an antibody, a biotin, and an avidin or streptavidin.

16. The method of claim 14, wherein said label is a fluorescent label.

17. The method of claim 16, wherein said detecting comprises using a fluorometer to detect fluorescence of said label.

18. The method of claim 17, wherein said fluorometer uses a bandpass filter.

19. The method of claim 17, wherein said fluorometer is a surface-reading fluorometer.

20. The method of claim 17, wherein said fluorometer is a surface-reading fluorometer.

21. The method of claim 16, wherein said detecting comprises using a fluorometer to detect fluorescence of said label.

22. The method of claim 14, wherein said label is selected from the group consisting of a radioactive label, a magnetic label, a colorimetric label, an enzymatic label, a fluorescent label, a metal, an antibody, a biotin, and an avidin or streptavidin.

23. The method of claim 14, wherein said label is a fluorescent label.

24. The method of claim 1, wherein said method is performed at a pH greater than about pH 7.

25. The method of claim 1, wherein said method is performed at about pH 8.

26. The method of claim 1, wherein said pectinase comprises an enzyme selected from the group consisting of polygalacturonases, pectinesterases, pectin lyases, and hemicellulases.

27. The method of claim 1, wherein the processed biological sample is a sample that has been subjected to an operation selected from the group consisting of comminuting, homogenizing, heating, evaporation, lyophilization, filtering, concentrating, fermenting, freezing, and blanching.

28. The method of claim 1, wherein the biological sample is selected from the group consisting of a fruit, a vegetable, a fruit juice, and a vegetable juice; said lectin is a fluorescently labeled lectin selected from the group consisting of wheat germ agglutinin (WGA), succinylated WGA, pokeweed lectin, tomato lectin, potato lectin, barley lectin, rice lectin, stinging nettle lectin, a vicilin, a chitovibrin, a Vibrio lectin, and a hevein; said pectinase is a pectinase selected from the group consisting of polygalacturonases, pectinesterases, pectin lyases and hemicellulases; said sample is processed by an operation selected from the group consisting of comminuting, homogenizing, heating, evaporation, lyophilization, filtering, concentrating, fermenting, freezing, and blanching; and said detecting comprises detecting a signal from the fluorescent label labeling said lectin.

29. A method of detecting chitinous material in a non-chitinous biological sample, said method comprising in a solution at a pH ranging from about pH 7 to about pH 9 contacting said biological sample with a fluorescently labeled probe that is a lectin that binds chitin;

filtering said sample;

washing said filter to remove unbound lectin;

eluting bound lectin with a chitin, a chitin degradation product or a chitin analogue; and

detecting said lectin wherein detection of said lectin indicates the presence of chitinous material in said biological sample.

30. The method of claim 29, wherein said chitin comprises an insect or insect part.

31. The method of claim 29, wherein said chitin is a component of a microorganism.

32. The method of claim 31, wherein said microorganism is selected from the group consisting of a fungus, a mold, and a yeast.

33. The method of claim 31, wherein said microorganism is a fungus selected from the group consisting of *Cladosporium herbarum*, *Fusarium oxysporum*, and *Stemphylium botryosum*, ~~Alternaria~~ *alternata*, *Geotrichum candidum*, *Rhizopus stolonifer*, *Botrytis cinerea*, *Phytophthora parasitica*, *Pythium aphanidermatum*, *Pythium ultimum*.

34. The method of claim 29, wherein said biological sample is selected from the group consisting of an agricultural product, a food product, a wood product, a textile, and an animal tissue product.

35. The method of claim 34, wherein said agricultural product is selected from the group consisting of a fruit, a vegetable, a grain, forage, a silage, a juice, a wood, a flower, and a seed.

36. The method of claim 34, wherein said agricultural product is a fruit selected from the group consisting a fruit, a vegetable, a grain, forage, a silage, a juice, a wood, a flower, and a seed.

37. The method of claim 29, wherein said lectin is selected from the group consisting of wheat germ agglutinin (WGA), succinylated WGA, pokeweed lectin, tomato lectin, potato lectin, barley lectin, rice lectin, stinging nettle lectin, a vicilin, a chitovibrin, a Vibrio lectin, and a hevein.

38. The method of claim 29, wherein said method further comprises contacting aid sample with a blocking reagent.

39. The method of claim 38, wherein said blocking reagent is serum albumin.

40. The method of claim 29, wherein said chitin degradation product is N-acetyl D-glucosamine.

41. The method of claim 29, wherein said lectin is labeled with a detectable label.

42. The method of claim 29, wherein said method is performed at a basic pH greater than about pH 7.5.

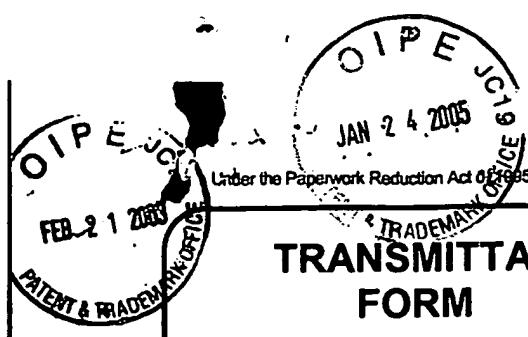
43. The method of claim 29, wherein said method is performed at a basic pH about pH 8.0.

44. The method of claim 29, wherein the biological sample is selected from the group consisting of a fruit, a vegetable, a fruit juice, and a vegetable juice; said lectin is a fluorescently labeled lectin selected from the group consisting of wheat germ agglutinin (WGA), succinylated WGA, pokeweed lectin, tomato lectin, potato lectin, barley lectin, rice lectin, stinging nettle lectin, a vicilin, a chitovibrin, a Vibrio lectin, and a hevein; and said detecting comprises detecting a signal from the fluorescent label labeling said lectin.

45. The method of claim 29, further comprising contacting said biological sample with a pectinase.

46. The method of claim 45, wherein said pectinase is selected from the group consisting of polygalacturonases, pectinesterases, pectin lyases and hemicellulases.

Stemphylium  
ALTERNARIA



U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**COPY**

**RECEIVED**

**FEB 26 2003**

**USC CENTER 1600/2900**

## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

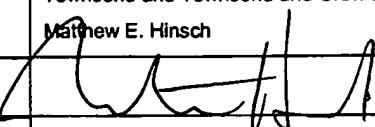
Total Number of Pages in This Submission

Application Number	09/759,815
Filing Date	January 10, 2001
First Named Inventor	Potts
Art Unit	1627
Examiner Name	Ralph J. Gitomer
Total Number of Pages in This Submission	Attorney Docket Number
	02307O-130610US

### ENCLOSURES (Check all that apply)

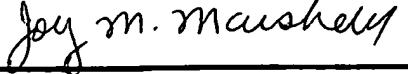
<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to Group
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment / Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	<input type="checkbox"/> Return Postcard
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> Petition to Correct Inventorship
<input type="checkbox"/> Certified Copy of Priority Document(s)	Remarks	
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application	The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.	
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Townsend and Townsend and Crew LLP Matthew E. Hinsch	
Signature		
Date	February 14, 2003	

### CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on this date:

Typed or printed	Joy M. Marshall		
Signature		Date	February 14, 2003

This collection of information is part of the Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

SF 1433106 v1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

O P E R A T I O N  
FEB 21 2003  
PATENT & TRADEMARK OFFICE  
JAN 24 2005  
O P E R A T I O N  
FEE TRANSMITTAL  
for FY 2003

Patent fees are subject to annual revision.

<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27
---

TOTAL AMOUNT OF PAYMENT	(\$)	130
-------------------------	------	-----

METHOD OF PAYMENT (check all that apply)		
<input type="checkbox"/> Check	<input type="checkbox"/> Credit Card	<input type="checkbox"/> MoneyOrder
<input checked="" type="checkbox"/> Deposit Account	<input type="checkbox"/> Other	<input type="checkbox"/> None

Deposit Account Number	20-1430
Deposit Account Name	Townsend and Townsend and Crew LLP

The Commissioner is authorized to: (check all that apply)

Charge fee(s) indicated below  Credit any overpayments

Charge any additional fee(s) during the pendency of this application

Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

## FEE CALCULATION

## 1. BASIC FILING FEE

Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)	Fee Description	
1001 750	2001 375	Utility filing fee	
1002 330	2002 165	Design filing fee	
1003 520	2003 260	Plant filing fee	
1004 750	2004 375	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	
SUBTOTAL (1)		(\$)	

## 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

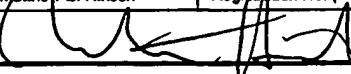
Total Claims	Extra Claims		Fee Paid
	Fee Paid	Fee Paid	
Independent Claims	Fee Paid	Fee Paid	
Multiple Dependent	Fee Paid	Fee Paid	

Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)	Fee Description	
1202 18	2202 9	Claims in excess of 20	
1201 84	2201 42	Independent claims in excess of 3	
1203 280	2203 140	Multiple dependent claim, if not paid	
1204 84	2204 42	** Reissue independent claims over original patent	
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent	
SUBTOTAL (2)		(\$)	

\*\*or number previously paid, if greater; For Reissues, see above

Complete If Known	
Application Number	09/759,815
Filing Date	January 10, 2001
First Named Inventor	Potts
Examiner Name	Ralph J. Gitomer
Group Art Unit	1627
Attorney Docket No.	02307O-130610US

FEE CALCULATION (continued)					
3. ADDITIONAL FEES					
Large Entity	Small Entity	Fee Description	Fee Paid		
Fee Code (\$)	Fee Code (\$)	Fee Description	Fee Paid		
1051 130	2051 65	Surcharge - late filing fee or oath			
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet			
1053 130	1053 130	Non-English specification			
1812 2,520	1812 2,520	For filing a request for reexamination			
1804 920*	1804 920*	Requesting publication of SIR prior to Examiner action			
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action			
1251 110	2251 55	Extension for reply within first month			
1252 410	2252 205	Extension for reply within second month			
1253 930	2253 465	Extension for reply within third month			
1254 1,450	2254 725	Extension for reply within fourth month			
1255 1,970	2255 985	Extension for reply within fifth month			
1401 320	2401 160	Notice of Appeal			
1402 320	2402 160	Filing a brief in support of an appeal			
1403 280	2403 140	Request for oral hearing			
1451 1,510	1451 1,510	Petition to institute a public use proceeding			
1452 110	2452 55	Petition to revive – unavoidable			
1453 1,300	2453 650	Petition to revive – unintentional			
1501 1,300	2501 650	Utility issue fee (or reissue)			
1502 470	2502 235	Design issue fee			
1503 630	2503 315	Plant issue fee			
1460 130	1460 130	Petitions to the Commissioner	130		
1807 50	1807 50	Petitions related to provisional applications			
1808 180	1808 180	Submission of Information Disclosure Stmt			
8021 40	8021 40	Recording each patent assignment per property (times number of properties)			
1809 750	2809 375	Filing a submission after final rejection (37 CFR § 1.129(a))			
1810 750	2810 375	For each additional invention to be examined (37 CFR § 1.129(b))			
1801 750	2801 375	Request for Continued Examination (RCE)			
1802 900	1802 900	Request for expedited examination of a design application			
Other fee (specify)					
*Reduced by Basic Filing Fee Paid				SUBTOTAL (3)	(\$130)

SUBMITTED BY					
Name (Print/Type)	Matthew E. Hirsch	Registration No. (Attorney/Agent)	47,651	Telephone	415-576-0200
Signature				Date	February 14, 2003

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

*DR*  
PATENT  
3-11-03  
Attorney Docket No.: 023070-130610US

Assistant Commissioner for Patents  
Washington, D.C. 20231

On February 14, 2003

TOWNSEND and TOWNSEND and CREW LLP

By: Joy M. Marshall



*RECEIVED*  
FEB 28 2003  
TECH CENTER 1600/2000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Potts *et al.*

Application No.: 09/759,815

Filed: January 10, 2001

For: THE DETECTION AND  
REMOVAL OF MICROORGANISM  
CONTAMINATION

Examiner: Ralph J. Gitomer

Art Unit: 1627

PETITION TO CORRECT  
INVENTORSHIP UNDER  
37 CFR § 1.48(b)

Assistant Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Sir:

Applicants petition under 37 CFR § 1.48(b) to remove Steven J. Potts, David C. Slaughter, James F. Thompson and Jennifer J. Payne as inventors to the above-identified patent application.

The above-listed individuals are requested to be removed as inventors because they are not inventors of the pending claims, as amended in the Response to Restriction, mailed January 21, 2003.

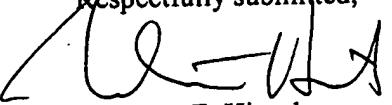
Please deduct the petition fee, pursuant to 37 CFR § 1.17(i), of \$130 from Deposit Account No. 20-1430 of the undersigned. Please charge any additional fees or credit overpayment to the above Deposit Account.

02/25/2003 RBELETE1 00000015 201430 09759815

01 FC:1460 130.00 CH

If a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned attorney at (415) 576-0200.

Respectfully submitted,

  
Matthew E. Hinsch  
Reg. No. 47,651

TOWNSEND and TOWNSEND and CREW, LLP  
Two Embarcadero Center, 8th Floor  
San Francisco, California 94111-3834  
(415) 576-0200  
(415) 576-0300 (facsimile)

SF 1427569 v1